THE VETERINARY RECORD

A Weekly Journal for the Profession.

FOUNDED BY WILLIAM HUNTING, F.R.C.V.S.

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THE NUMBERS OF THE PROFESSION.

Of late years the number of graduates upon our Register has not altered greatly: the tendency has been rather to decline than to advance, but the decrease has not been very evident. In a few years time, it is probable that the decline will have become quite marked; and that it will affect private practice more than would appear at first sight.

Far fewer men will join the profession during the next few years at least—that much is certain: and we must expect about the usual number of deaths; obviously this ensures a decrease in our Register. In addition, new graduates of the future and young men already graduated will find more inducements to draw them away from private practice than have ever been offered before.

It is quite possible that the war may be followed by a permanent increase in our standing Army, and this will mean an increase in its normal annual call upon the profession. It is certain that whole-time civil veterinary appointments at home and abroad, which were increasing before the war, will continue to do so afterwards; and this will attract many who might otherwise have practised privately. Probably, also, our Colonisation will expand, and though it may not affect our profession greatly at first, will undoubtedly work in the same direction. Add to this the general recognition that private practice is not now, and probably never will be again, so lucrative as it once was, and it seems clear that we may expect that, of the diminished number of men entering the profession in the next few years, only very few—and those as a rule not the best, will elect to practise privately. This will mean that each year the deaths of men in practice will exceed the number of entrants to the profession.

For the next few years, this need not greatly concern us. Times will be very hard for private practitioners, and overcrowding would make them harder; though we doubt whether, taking the United Kingdom as a whole, the profession has ever been so surcharged as some have thought. But, if the conditions likely to obtain in the near future continue long, their effect will be serious. A permanently low supply of new graduates, with a permanently increased call upon them from the public services, must end in the supply of private practitioners falling below the national requirements. Looking ahead, such an eventuality does not appear to be unlikely.

A CONTRAST.

In our last issue we commented very briefly on the treatment accorded to veterinary work in India and our Oversea Dominions and in England. Commenting on this, and on the new Veterinary College at Lahore, and the opening ceremony, a correspondent writes us:—

"Apparently in India things are arranged differently as regards so-called 'status.' The Viceroy goes *first* to open the Veterinary College, and, *secondly*, to open the Medical College. He goes accompanied by the Legislative Council, the Judges of the Chief Court, and the principal civil and military officials in the Province. The streets are lined with police and kept clear of traffic; a guard of honour is drawn up at the College to await his arrival, and the new Veterinary College, which cost 10 lakhs (or £66,000), is opened with considerable pomp.

Imagine the King and his Cabinet and principal Judges driving through the streets of London, cleared of traffic, to open a new State-endowed Veterinary College!!!"

FRACTURED FEMUR.

The subject of this note was a small bay mule gelding—an aged animal.

History. At the time of the accident, the mule was carrying a loaded pack on the line of march, and it was reported that the animal fell under its load and rolled into a ditch, and was got on to its feet again with great difficulty, and was then found to be extremely lame of the near hind leg.

After examination of the case I diagnosed fracture of the femur, and the animal was destroyed.

Post-mortem examination showed that there was comminuted fracture of the left femur—the shaft and head of the bone being broken into twelve pieces. The distal end (the condyles and trochlea and a small portion of the shaft) were intact.

A. N. FOSTER, Capt. A.V.C.

In the field, 29 Jan., '16.

We are indebted to Capt. P. McIntyre, A.V.C. (T.) for the photograph of D Mobile Vety. Section (Territorial) at the foot of the Sphynx, on Christmas Day, 1915, which we reproduce this week.

NICOTINE POISONING.

An army horse suffering from lice was clipped and dressed, "as far as can be gathered," with a 1 to 20 solution of Nicotine, instead of 1 to 120. An hour after the dressing was applied she began to blow hard and show pain, and broke out into a very profuse sweat.

When seen two hours after she was still blowing very hard, and down, but got up and walked to box about 20 yards away; staggering gait, trembling all over, twitching of the neck muscles and jerking the head up, extremities cold, but warm under the rugs. Pulse imperceptible, temperature 93.

There also appeared to be a form of lock-jaw, as the jaws could be opened only about two inches, and it was impossible to ball her and very difficult to get any liquid down. She gradually improved, and next morning was feeding well, and showed little the matter with her.

ARNOLD SPICER, F.R.C.V.S.

New Oxted.

PARALYSIS OF RECTUM AND BLADDER.

The following case may be of interest. Although presenting no unusual symptoms, it is not of common occurrence.

Subject. Common light draught mare, age 12 years.

I have been unable to obtain the history. The animal was sent to the mobile veterinary section, with a note stating that she was suffering from debility and paralysis of the rectum.

Symptoms. Sphincter ani relaxed, with a quantity of faeces protruding from the anus. Incontinence of urine: the thighs were irritated from the continuous dripping of the latter, which sometimes came away in drops and other times in a stream without the animal getting into the position usually taken during urination. The animal sometimes extended itself and strained as if in pain.

Partial paralysis of the tail, especially the levator muscles, with atrophy of the muscles of the hind quarters, particularly the gluteals. The animal passed no faeces except that portion which was pushed outside the anus and got rid of by gravitation.

I examined the vagina and rectum by hand. The vagina was normal though compressed, due to the enormous dilation of the rectum, from which I removed 26 lbs. of faeces From the rectum I explored the pelvis and under aspect of lumbo-sacral vertebrae, but found nothing abnormal except the great fulness of the bladder.

To outward appearance there was an enlargement in the sacral region in the neighbourhood of the croup, but on manipulation it did not present any abnormality, and may be accounted for by the atrophy of the muscles referred to. The animal's general health was good.

Treatment. Administered a physic ball, followed by daily hypodermic injection of strychnine.

I had this case under observation and treatment for a fortnight, during which time no different symptoms developed, nor was there any appreciable sign of the paralysis being progressive. The only good the treatment seemed to do was to retard the disease.

The animal was evacuated to one of our base hospitals, so that I have lost sight of the case.

J. FOX, Lieut. A.V.C. (S.R.)

[Two films which accompanied this note were, unfortunately, not strong enough to reproduce.]

ABSTRACTS FROM FOREIGN JOURNALS.

THE INTRA-PALPEBRAL MALLEIN REACTION.

The intra-palpebral mallein reaction was proposed by Lanfranchi in 1914, with the idea of combining in one method the joint actions of the classic subcutaneous mallein test and the ophthalmic test, and so avoiding the errors that accompany both methods when employed separately.

The technique of the intra-palpebral test is very simple, and consists in injecting the classic dose of mallein into the thickness of the lower eyelid. The injection is made by driving in the needle horizontally, one centimetre (2/5 inch) from the edge of the eyelid, about its centre. The results distinctly represent the compendium of the subcutaneous and the ophthalmic mallein tests.

Francesco Favero publishes a highly detailed report of the reactions to the test which he observed in two glandered horses.

The first case was a half-bred mare, seven years old, a capital trotter, and in excellent condition. She was suspected of glanders and subjected to the ophthalmic mallein test. This gave a positive reaction, which was prolonged into the third day. The histological examination of the conjunctival exudate showed 98% of polynucleated neutrophile cells. The mare was then subjected to the intra-palpebral test upon the other eye.

The thermic reaction was speedy and considerable. It reached its maximum in eight hours with a register of 106.5° F., being a rise of about 6.5° F. over the previous average temperature. On the fifth day, when the animal was slaughtered, it had not yet descended to the normal.

There was a notable general reaction. The animal showed dulness, prostration, and loss of appetite. On the first day there were muscular tremors, especially of the shoulders and thighs, which shook the whole of the body.

The local reaction commenced in the second hour with a diffuse oedematous swelling of all the lower eyelid and of the upper eyelid, The oedema gradually augmented and became more diffused; and in twenty-four hours reached downwards to the inferior limit of the zygomatic crest, somewhat surpassing it anteriorly, and posteriorly reaching to the arcade of the lower mandible. It remained thus stationary for some hours, then gradually diminished, but on the fifth day had not yet completely disappeared. The oedema was warm, tense, and very sensitive.

D Mobile Veterinary Section. Christmas Day, 1915.

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A purulent conjunctivitis also appeared. At the third hour, a collection of thick yellowish material was noticed in the conjunctival sac. At the fourth hour this appeared at the internal angle of the eye in the form of a clot as large as a kidney bean. Afterwards it augmented by degrees, and from the eighteenth to the twenty-fourth hour it flowed from all the free edge of the lower eyelid in the form of a thick veil, adhering to and soiling the hairs of a considerable portion of the underlying cheek. The discharge continued for about thirty hours. Histological examination of the discharge revealed 92% of neutrophile polynucleated cells.

Post-mortem examination confirmed the existence of glanderous infection, with limited and recent lesions.

The second case was a common-bred heavy draught horse, about twenty years old, in bad condition, brought for treatment because it was said to be affected with strangles. Swollen glands and a suspicious bilateral discharge were present. The ophthalmic mallein test was practised, and the horse reacted positively, with a very abundant purulent secretion persisting for about forty hours. Histological examination of this revealed 95% of neutrophile polynucleated cells.

The intra-palpebral reaction was then attempted upon *the same* eye. The thermic reaction was quick and very distinct. It reached its maximum at the eighth hour with a register of 104.5° F., being a difference of almost 4° F. over the preceding average temperature. It remained thus, with the exception of very slight oscillations, till the twenty-fourth hour, then gradually descended, and returned to the normal at the seventieth hour.

The general reaction was slightly appreciable, The horse showed a certain degree of depression and loss of appetite,

The local reaction was considerable. It was represented by a tense, warm, and very sensitive swelling, which involved both eyelids, reducing the interpalpebral space to a mere fissure. The swelling extended over a considerable portion of the cheek, and reached its maximum about the eighteenth hour. Inferiorly, it reached down beyond the inferior limit of the zygomatic crest. It remained thus for about twelve hours and then gradually diminished, lessening first upon the cheek and then in the eyelids, and finally it disappeared altogether at the seventh day.

There was also a considerable ophthalmic reaction. At the eighth hour, large flakes of a purulent material were hanging from the reduced interpalpebral space. The discharge was very persistent, and at the second or third day it was slightly haemorrhagic. At the fifth day it became purulent again, then muco-purulent, and finally ceased on the eighth day. Histological examination of discharge collected at the eighth hour revealed 91% of neutrophile polynucleated cells.

Post-mortem examination revealed diffuse glanderous lesions, both recent and old.

Before destroying this second horse, the author also subjected it to the intradermopalpebro-reaction, which he carried out upon the eye which had not yet been tested, in the following manner. Seven days after the intrapalpebral test, a dose of 0.2 c.c. of mallein diluted with physiological solution in the proportion of 1 to 10 was injected *into the thickness of the derma*—about the middle of the eyelid, and a centimetre from its border.

The reaction was represented by a swelling of the eyelid, which commenced in the first hour and reached its maximum towards the eighth or tenth hour, reducing the interpalpebral space to a third of the normal, and becoming diffused for a short time to the underlying region. It remained stationary for about twenty-four hours, then gradually diminished, and disappeared at the seventh day. Conjunctivitis was also seen, with a scanty muco-purulent discharge which commenced about the sixth hour and persisted till the thirty-sixth.

The author also used this last method upon some non-glandered horses. These showed a more or less diffuse swelling of the eye-lid, which disappeared in a period of about eighteen hours.

The author regards these two cases as confirming the value of the ophthalmic test, and as showing that the histological examination of the conjunctival exudate is a useful auxiliary to it. He thinks, however, that the intrapalpebral reaction is an even better test, as it combines all the results of both the subcutaneous and ophthalmic tests. He remarks that in both his cases the thermic reaction appeared quickly, and attributes this to a more rapid absorption of mallein than occurs in the subcutaneous test. The general reaction was marked in the first case and slight in the second, and the author explains this by the fact that the first horse was a well-bred one and of nervous temperament, while the second was of common breed. He adds that a preceding ophthalmic test seems to exaggerate the local and ophthalmic effects of the intrapalpebral test, both as regards intensity and duration.

The author has used the intrapalpebral test upon numerous non-glandered horses, with results that were always distinctly negative. In some, he noticed a swelling of the eyelid which appeared at the second or third hour and disappeared in a period of twelve to eighteen hours at most, without a true ophthalmic reaction. In glandered subjects, on the other hand, the local manifestations are considerable both in intensity and duration, and are easy of interpretation. The author, then, highly recommends the intrapalpebral reaction. One of its advantages is that it may be employed upon feverish subjects.—(*La Clinica Veterinaria*).

Experimental Tuberculosis in the Guinea pig.

G. Kiralfi, of Budapest, has recorded the following peculiar case of experimental tuberculosis in a guinea-pig. The animal was killed four weeks after being inoculated with material suspected of being tuberculous. Post-mortem, none of the anatomical appearances which are characteristic of experimental tuberculosis in guinea-pigs were found. On the other hand, on the intestinal wall of three different divisions of the small intestine, lesions were found the nature of which were at first diffi-

cult to determine, but which, when histologically examined, proved to be tuberculous. The uncommon features of this condition were the kind and the localisation of the tubercular lesions, and their independent appearance without coincident tubercular alterations of the tissues elsewhere. The case is worthy of recollection in connection with the post-mortem examination of experimentally inoculated guinea-pigs.—(*Berliner Tier. Woch.*)

THE RAVEN AND THE FOX AS ANTHRAX CARRIERS.

F. Mollet has published (*Zentralbl. für Bakt.*) a note upon this subject. Taking into consideration the special conditions which exist in Switzerland, he has minutely examined all the factors which may favour the spread of anthrax. In his investigation are included some very interesting researches upon the question whether the faeces of ravens and foxes which have ingested anthrax flesh can contain living germs and so become a cause of contagion. The author finds that anthrax bacilli are killed in the digestive tract of the raven and of the fox, while anthrax spores pass uninjured through the intestines of these animals.

He therefore concludes that these animals, if they have previously ingested infected carrion containing anthrax spores, may very well transmit anthrax germs to great distances with their faeces. *La Clinica Veterinaria.*

W. R. C.

SOME PROBABLE DEVELOPMENTS OF THE WORK OF STATE VETERINARY OFFICERS, by Professor S. DÉLÉPINE, M.B., C.M., M.SC., Director of the Public Health Laboratory, University of Manchester.

It has been shown that a fairly heavy and lengthy course of post-graduate studies is needed by candidates for the Diploma in Veterinary State Medicine, in order that the diploma should be a guarantee of the fitness of its holders for the discharge of public duties in relation to public health, veterinary preventive medicine and hygiene generally.

The number of responsible and well-remunerated full-time public posts open in this country to men who have devoted some time to post-graduate studies bearing upon the prevention of animal diseases is comparatively restricted at present, and, consequently, the number of men undergoing special training in preparation for these posts is small. The time must come sooner or later when it will be recognised that further progress in the control of animal diseases for agricultural and public health purposes can only be realised by the creation of a well-organised and competent State Veterinary Service.

The very important work which has been done by the Board of Agriculture and veterinary colleges upon epizootic diseases, such as contagious pleuro-pneumonia, rabies, swine fever, foot-and-mouth disease, outbreaks of which are likely to occur with dramatic suddenness, must not blind us to the fact that there are other diseases which are always with us, constantly spreading, and claiming a vast number of victims, but attracting less attention because they are more insidious, more slowly progressive, and possibly more troublesome to deal with.

It would be difficult at the present time, except with regard to some of the acute epizootic diseases to which the Board of Agriculture devotes special attention, to obtain accurate data as to the prevalence and distribution of animal diseases; yet without this knowledge the devising of proper measures for the control and prevention of these diseases is difficult, if not impossible.

In connection with tuberculosis, some sanitary authorities have appointed veterinary surgeons to co-operate with the medical officer of health, especially with the view of preventing infection of human beings. The amount and responsibility of the work thrown upon some of these officers may be indicated by one example. The veterinary officer appointed by the Manchester Sanitary Committee to inspect cows and farms in connection with the milk supply, has had under his supervision more than 35,000 cows housed in nearly 2000 farms situated chiefly in six counties

In several important cities the inspection of meat is entrusted to competent veterinary inspectors, but this system is not yet general, and where it is in force the amount of work thrown upon the veterinary staff is so great that only part of the good that might be expected is realised. In the year 1904, in Manchester, the number of carcases that had to be inspected amounted to more than one per minute, day and night.

Under present conditions, our knowledge of the causes, prevalence, distribution, and prevention of the diseases to which animals are liable in this country, could not be expected to grow very rapidly. It is to be hoped that in the near future there will be in each county a sufficient number of competent State veterinary officers devoting the whole of their energies to the study of the causes, the occurrence, the conditions influencing the prevalence, the administrative control, and the prevention of the animal diseases occurring in the districts in their charge. From these officers and, if necessary, from officers connected with county boroughs, the agricultural and the public health authorities should be able and entitled to obtain all the information they require.

In each administrative area the veterinary staff should have at their disposal isolation sheds suitable for the study of living animals affected with diseases requiring investigation. The opportunities offered by the abattoirs should also be utilised for the purpose of controlling accurately the effects of preventive measures carried out in country districts. At each important public abattoir (all abattoirs should be public) there should be one or more competent officers, whose duty it would be to determine the nature of the diseases causing the lesions observed in slaughtered animals. By a well-organised system of registration it would be possible after a comparatively short time to obtain more accurate ideas than we have at present of the prevalence and distribution of animal diseases.

The central authority, by which the work of all these local officers would be co-ordinated and to which all their reports would gravitate, would be in a better position than it is at present to legislate and govern efficiently.

These remarks relate only to some branches of a Home Veterinary Service, the creation of which cannot be indefinitely postponed. It must, however, be remembered that there are other departments opened to well-trained veterinary officers. Among these may be mentioned the Army Veterinary Service, the Indian Civic Veterinary Department, the Colonial Veterinary Services, the Veterinary Department of the Board of Agriculture and Fisheries. Although present conditions are not such as to stimulate keen competition for public posts open to veterinary health officers, the future may have in store greater inducements to specialised studies. —*Public Health*, Sept., 1915.

Slaughtering of Calves.—Fines.

At Crewkerne, Charles Frampton, butcher and dealer, of Beaminster, was summoned for causing or permitting to be slaughtered five calves which had been purchased by auction at sums over 30s. He was further summoned for causing or permitting seven calves to be slaughtered which were not marked with a broad-arrow as required. Frederick W. Boalch, butcher and dealer, of Misterton, and his son, Frederick W. Boalch, were also summoned for aiding and abetting Frampton in committing the said offence. The cases were taken together, and defendants pleaded guilty.

Supt. Bartlett stated that on the 5th inst. the defendant Frampton purchased seven calves at Bridport auction from Messrs. Morey & Son. They were moved to his premises at Beaminster, where he carried on the business as a butcher with his father and brother. While he was unloading the calves he was seen by Police-Sergeant Richardson of the Dorset Constabulary who asked if they were marked for slaughter. On examination, they were found not to be so marked. Defendant was given to understand they could not be slaughtered. The following morning the sergeant discovered they had been removed, and he traced them to Misterton.

Answering Mr. Hussey, Supt. Bartlett said the calves were marked at the auction either by the auctioneer or his assistant before they were moved. Continuing, Mr. Bartlett said the prices were £3 5s., 14s., £2 14s., £1 14s., £2 6s., £1 5s., £4, £2 4s., and £3. This was the first case in that part of the country.

Police-Sergeant Richardson (Beaminster) stated that he, in company with Police-Sergeant Broome, visited Mr. Boalch's slaughterhouse at Misterton. There they saw seven calves slaughtered and hung up. One of these, a black heifer calf, witness identified as the calf he saw in Frampton's premises the previous night.

The Chairman said defendants had clearly intended to evade the law. It looked as if they had been acting in collusion. On the first charge, Frampton would be fined £15—£3 per animal—and in the second, £21. Boalch would be fined £14, and his son, who ought to have known better and could not be held blameless, would be fined £7.

Supt. Bartlett asked for 10s. 8d. expenses, and these were allowed. The total amount of the fines was £57 10s. 6d.

The Anthrax Order—Cuckfield.

Charles Pearse, farmer, Cuckfield, was summoned for an offence under the Anthrax Order. Defendant pleaded guilty.

Mr. Lawson Lewis said defendant was a farmer of Pilstye Farm, Cuckfield. The allegation was that he acted in contravention of Regulation 10 of the Anthrax Order, 1910, but there could have have been laid against him two informations: one for failing to notify a suspected case of anthrax, and the other for cutting the carcase of a suspected animal. They proceeded only with regard to the latter one. On December 22nd a cow belonging to the defendant died suddenly. There was suspicion of the disease from which the animal died, and there was an obligation upon the defendant. The defendant left the carcase unburied in a field, and he cut off an ear, wrapped it up in paper, and sent it to Mr. Taylor, veterinary surgeon, who at once reported the matter. On the following day Sergeant Potter called, and the carcase was then unburied, and it had to be burnt and entirely destroyed. A specimen of the animal's blood was sent up to the Board of Agriculture, and the report received was that anthrax existed. Some two years before defendant had a suspected case, and all the regulations and obligations were then explained to him, so he could not come into court and plead ignorance.

Defendant said he had no idea that the animal had anthrax. It was not correct to say that the animal died suddenly. He treated it for over 30 hours, and thought it was for indigestion and chill. He thought the cow was getting better. Subsequently, at eight o'clock, he found her dead in her stall. He thought it would be wise to let the veterinary surgeon know. It was not two years, but three years, ago when the other cow died. The veterinary surgeon on the former occasion cut off the ear of the cow and took it away with him. In the present case he thought that if he sent for the veterinary surgeon the same evening he would not come, as it was late, and that if defendant sent the ear to him he would do all that was necessary. Defendant subsequently disinfected the stall and burnt it, also the knife, and the pocket the man took the ear in, and he considered he had done everything he could. He cut off the ear in ignorance, and thought that what he was doing was perfectly right. It was to assist the police. In cases of anthrax "they are generally dead, and you don't see them ill," rarely lasting for 30 hours.

The Chairman said the Bench did not doubt what defendant said, but they had to deal with a most dangerous and serious case from a public point of view. No doubt it was unusual for a cow suffering from anthrax to last so long as 30 hours; when the animal died suddenly at last and defendant suspected it he ought to have reported the matter at once to the proper authority. Defendant: I thought I was right in doing the same as the "vet." did. The Chairman said defendant was very wrong in cutting off the ear, and the man who took it might have contracted anthrax and died. Taking all things into consideration, they must fine defendant £3 3s. and £2 2s. for expenses.—*The Mid-Sussex Times.*

Protection against Frost-bite and other effects of exposure of the Extremities to Wet Cold (Local frigorism).

[The following is a portion of a long article in the *Brit. Med. Jour.* of Dec. 18.]

Adequate feeding, perfect circulation, moderate muscular exercise, good general health, warm clothing, all tend to give to the body its maximum power of resistance to cold. It is obvious that anything that tends to impair the nutrition and activity of the tissues, and to interfere with the freedom of circulation, is favourable to the occurrence of frigorism. Tightness of the clothing of the extremities—for example, tight boots, socks, leggings, puttees, etc.—is particularly detrimental. Heavy clothing and other equipment, by increasing fatigue, has also a predisposing influence.

Warm clothing does not mean heavy and thick garments, but clothes capable of keeping imprisoned near the surface of the body a fairly thick layer of air. It is generally recognised that several layers of light woollen or other fabrics form a particularly efficient protection against cold air when the air is not in a state of rapid motion. Common experience has also shown that a layer, however thin, of some material impervious to wind, worn outside ordinary clothing, is the most efficient protection against cold draughts and winds. Paper, mackintosh, skins, closely woven fabrics worn outside ordinary clothes have all been extensively used for this purpose.

For protection against cold water, it is necessary that the external covering should be impervious to and not affected by water. India-rubber stockings, waders, and boots have been used extensively by anglers and men

working in water and mud, not only as a protection against wet but also against cold. For the same reason sailors and others have had resort to oilskin.

When at the beginning of the winter of 1914–15 a number of soldiers were invalided owing to the effects of exposure to cold, there must have been some reason why advantage had not been taken of these well-known methods of protection. On consideration it appeared to me that the main reasons were that the articles on the market at the time were too heavy, too cumbersome, too expensive, too perishable, and generally incapable of being adapted to the present requirements of the soldier.

It occurred to me that a suitable article might be made of a thin fabric rendered waterproof by means of oxidized linseed oil. After several weeks' trial I succeeded at the beginning of January, 1915, in manufacturing by simple means thin and soft oil-silk which could be made into absolutely waterproof bags by means of apposition seams.* These bags were used successfully in a number of experimental tests.

The same material and method can also be employed for manufacturing very light waterproof coverings for various parts of the body, a matter of some importance, since the protection of the body as a whole against losses of heat is of great value in increasing the resistance of any part of the body against local frigorism.

Many experiments were made to test the permeability of oil-silk of various thicknesses to water, and the effects of addition to the oil of resins, neutral fats, paraffin wax, etc., with the result that linseed oil boiled with a lead salt gave satisfactory results when the oil-silk was of moderate thickness.

The methods finally used by me in the laboratory, though comparatively simple, required strict attention to several details, such as the selection of the fabric, the size and uniformity of the meshes, the composition of the "boiled" linseed oil, the duration of exposure to various temperatures, the shapes permitting of sound apposition seams being made, the thickness of the oil coating etc.

I had some difficulty in convincing practical men of the possibility of manufacturing oil-silk bags at a moderate cost, until I met Mr. H. Storey of Lancaster, who took a great interest in the matter. Some modifications which appeared to be convenient for manufacturing in bulk proved disappointing, and led to serious loss of time, for when rather late in the year the opportunity of trying the bags on a large scale occurred, certain defects were discovered from which the bags manufactured in the laboratory early in the year were free. It has been found necessary, therefore, to return to my original methods.

Bags prepared in this way can be immersed in boiling or in ice-cold water without any appreciable damage to the material or to the seams.

Properly prepared oil-silk offers considerable resistance to alcohol, ether, chloroform, acetone, benzol, petroleum, solid or liquid neutral fats, 1 to 2 per cent. watery solu- of nitric, sulphuric, and hydrochloric acids, mercuric chloride, iodine, phenol, chlorinated lime, izal, etc.; it is attacked by 2 per cent. watery solutions of the alkalis, and also, but more slowly, by soap. Oil-silk bags can be kept for many months without undergoing any material change.

Although the material is wetted by water, its permeability is very slight, and water can be kept inside an oil-silk bag for weeks without any apparent wetting of the external surface. Artificial wetting of the external surface of a bag containing water under pressure is not followed by any appreciable oozing; the wetted surface dries rapidly.

The addition of paraffin wax or of a neutral fat to the linseed oil prevents wetting of the material by water, but does not appear to increase as much as could be expected the impermeability of the fabric to water.

Thin oil-silk bags, after being creased and submitted to friction for some time, usually show evidence of some superficial damage. This is made evident when the bag is filled with water, by a slight oozing of the fluid through the damaged parts. This defect can be completely remedied by painting the surface of the bag with a layer of quick-drying linseed oil: after exposure to a current of air for a few hours the waterproofness of the bag is restored. A solution of nitro-cellulose in a solution of acetone and acetate of amyl adheres firmly to the oil-silk when dry. A tear in the oil-silk can be easily mended by fixing over it a piece of silk by means of this cement. Slight erosions may also be repaired by painting a thin coat of the same material over them.

The bags I used for the purpose of the practical tests conducted during the early months of 1915 extended up to the knee, and could be worn for twelve or fifteen hours at a time without discomfort and without undue condensation of perspiration. When, in later experiments, bags reaching up to the hip were used, it was found that, especially after a march, abundant condensation of water from perspiration took place on the inner surface of the bag, and that this water of condensation gradually gravitated into the foot portion. This accumulation of water round the foot reduced to a considerable extent the protection afforded by the bag.

It is obvious that if the use of long bags is essential, these bags should not be worn during long marches, of if they must be worn, their length should be reduced by suitable method of folding during the march. They may also be lined with some absorbent material preventing the water of condensation running down. The use of an absorbent lining should, however, be resorted to only if other methods are insufficient, for one of the advantages of the oil-silk bag is the ease with which it can be thoroughly cleaned both inside and out. I do not think, however, that waders of any kind are suitable for wear during long marches. What is important is that the men wearing them in the trenches should be able to leave the trenches and march or run without the waders interfering with the freedom of their movements. One of the essential conditions for success is that the foot and leg should be left entirely free from pressure causing any sensation of constriction or tightness or any interference with the freedom of circulation. The foot should be dry and warm when the wader is put on.

Large boots and large socks are indispensable; the inner woollen sock should be thick, the outer sock should be large enough to draw easily over the oil-silk bag. It should not be made of a material liable to shrink when wet. In the first tests I conducted both both the inner and the outer socks were woollen.

The use of a waterproof covering that can be worn inside the boot is recommended in this communication not because it is the only or even the best possible method. A waterproof top boot so devised as to leave a fairly wide air space between the boot and the greater part of the foot, ankle, and lower part of the leg would be more efficient and probably more convenient, provided the material used was light and did not interfere with movements.

The object of this paper is to show that it is possible to secure a sufficient amount of protection against the effects of wet cold without discarding the boots at present supplied to the army, provided the size of these boots is adequate.

* Sewing renders the waterproof material useless, so that sewn seams cannot be used.

Cruelty Charge dismissed.

At Kingstown Police Court on Thursday, 20th inst., before Mr. Macinerney, K.C., the National Society for Prevention of Cruelty to Animals charged Mrs. Rose Anne Byrne, Shanganagh House, Shankill, with cruelty to a horse by working it while in an unfit state and suffering from a raw sore.

Wm. Redmond, Inspector to the Society, conducted the prosecution, and Mr. Joseph O'Connor (instructed by Mr. Jas. Magee, solicitor), defended.

The inspector's evidence was that he saw the horse drawing an empty cart on November 10th at Kingstown. A veterinary surgeon saw the animal on the 14th. The horse was 30 years of age.

Cross-examined by Mr. O'Connor, Redmond admitted he did not go to see Mrs. Byrne until December 8th. He was waiting by order of the Society to give the defendant an opportunity of destroying the animal. Mr. Kelly, V.S., Dublin, saw the horse on the 10th December.

Mr. M. Barlow, V.S., Bray, stated that he saw a brown mare in Mr. Byrne's premises on November 14th. The mare was very old and in very poor condition. Witness saw the animal again yesterday, and it had considerably improved.

To Mr. O'Connor—There was a sore on the right hip, more or less superficial, and bald. The mare was physically capable of drawing an empty cart, but was not in a fit condition for working.

Mr. Macinerney: Surely the best proof that she was able to do the work was that she did do it. You don't require any mental qualifications for a horse to draw a cart.

Mr. Doyle, veterinary surgeon to the Society, said he had seen the horse with Mr. Barlow yesterday. He believed the horse to be at least 30 years of age. He judged the age by the angle of the horse's teeth and by the fact that they were almost rounded off.

To Mr. Macinerney—I could tell the age of a horse after 30, and any veterinary surgeon could.

Mr. Macinerney: I am very glad science has advanced so far. I understood that seven or eight years was the greatest age that could be told by the position of the teeth.

Cross-examined by Mr. O'Connor on the movement of the horse's teeth, witness said the angle changed progressively from after the tenth year. In 20 years they would move about 1½ inches. The horse's condition when he saw it yesterday was fair. He could see the remains of an old sore on one of its hips, but he saw no bald patch on either hip. The animal had had a rest.

Michael Byrne, son of the defendant, swore there was no sore on the horse when it was sent to Kingstown on the 10th November, and it was in perfect condition. There was a bald patch on the right hip where it had injured itself in the stable eight or ten months previously. The animal was purchased by his mother about fifteen months ago for £20. When the inspector came on the 8th December he (the inspector) did not say a single word about the horse having a sore on the hip. There was another mare, a chestnut, about which witness was summoned in Bray. It was this mare that Mr. Barlow examined for the society.

Mr. John Kelly, V.S., Earlsfort Terrace, Dublin, said he examined the animal in question at Mrs. Byrne's place on the 10th November, and he saw no reason for slaughtering the animal. There was not a man alive who could tell the age of a horse after 12 or 14 years.

Mr. Macinerney: Well, I always thought so until to-day.

Witness continued to the effect that the horse was perfectly fit to do the work it was doing, namely, farm work. On the right hip joint there was a mark of an old lesion, about two years old, but not the slightest sign of any recent sore. The spot was bald, and would remain so. The horse was about 12 years of age, and could work for many years. It was ridiculous to say the horse was 30 years of age.

Mr. Macinerney dismissed the case, and allowed the defendant two guineas costs.—*Dublin Evening Mail.*

VICTORIA VETERINARY BENEVOLENT FUND.

Dear Sir,—May I ask of your indulgence in publishing a list of Subscribers to a fund raised by Mr. W. L. Little, F.R.C.V.S., and Mr. John Brown, F.R.C.V.S., of Invergordon, Veterinary Officers working for the British Remount Commission in the United States of America and Canada.

The total of the subscriptions received only from the Veterinary Officers of the Commission, were to be equally divided between the Victoria Veterinary Benevolent Fund and Mrs. Moore's Army Veterinary Corps Comforts Fund.

It will, of course, be a source of congratulation that such a splendid effort has resulted in the fact that either funds have benefited to the extent of £33 2s. 6d., and that while the widows and children of Veterinary Surgeons can be helped, the care of the soldiers in the field has not been forgotten.

My Council desire to express their heartiest thanks to the Subscribers, to Mr. Little, and to Mr. Brown, for their efforts, and we at home are aware that Mrs. Moore, on behalf of the Army Veterinary Corps Comforts Fund, is extremely grateful.—Faithfully yours,

W. SHIPLEY, Hon. Sec.

Southtown, Gt. Yarmouth,
January 29th.

List of Subscriptions to the Lathrop Fund for a New Year's Gift to the Victoria Veterinary Benevolent Fund and Mrs. Moore's A.V.C. Comforts Fund:—

Lt.-Col. Deacon, P.V.O.	$10.00	J. Snider	$6.50
Lt.-Col. Drage	10.00	S. E. Boulter	6.50
John Brown	10.00	L. A. Brown	5.00
H. Tudor Hughes	6.50	K. D. Sewell	5.00
Jas. Gregg	6.50	P. R. Thompson	6.50
E. H. Stent	6.50	W. Sheriff	6.50
F. Thatcher	6.75	W. P. Keirstead	4.00
W. L. Little	6.50	Capt. Jolliffe	10.00
P. McGregor	6.50	Andrew Robb	6.50
H. F. Reynolds	6.50	H. G. Patterson	5.00
J. Hart	6.50	C. B. Maxwell	5.00
J. M. Courtwright	6.50	T. M. C. Hunt	6.50
Capt. Spanton	10.00	T. A. Huband	6.50
P. A. Gough	10.00	Chas. McEachran	10.00
R. A. McLoughry	6.50	John Blakeway	20.00
J. Goldbrown	6.50	Theo. Schondan	3.50
Tylney Haig	10.00	J. A. Armstrong	6.50
J. J. Murison	6.50	R. C. Duthie	5.00
J. King	6.50	J. W. Rider	5.00
P. Macquire	6.50	D. Warnock	5.00
John McBirney	4 50	R. S. Beattie	5.00
E. C. Winter	6.50	J. D. Knowles	6.50
M. J. Preston	6.50		$314.75

"and veterinary science"

"Agricultural education in the present day is an altogether different thing from what it was, say, a hundred years ago. In those days what is called "rule of thumb" reigned supreme, while to-day no man can be called agriculturally educated unless he has a knowledge of chemistry, botany, and veterinary science." [From a letter in *The Scottish Farmer*, by Mr. J. Lyon Guild.]

Nominations to Council R.C.V.S.

In usual course, the voting papers for members resident abroad will be issued early in the present month: and will carry the names of all members who have been nominated. Those now appearing on the nomination list are:—

Burt, W.	Pringle, R.
Clarkson, J.	Thomson, H.
Garnett, F. W.	Share-Jones, J. T.
M'Fadyean, J.	Trigger, R. C.

Presumably the members on service in France and Belgium are well within the fifteen days' limit (Bye-law 5). Those in Greece, Egypt and Mesopotamia would not, though it might be possible to give them a fuller opportunity to record their votes—if there be further nominations in the interim—by a duplicate issue of the papers.

Donations to R.C.V.S.

The Secretary of the Royal College of Veterinary Surgeons begs to acknowledge the receipt of the following donation foa 1916 to the College funds:—

Mr. E McSwiney, Cork	£1	1	0
Mr. T. V. Pettifer, Tetbury, Glos.	1	1	0
Mr. C. A. Squair, Reigate	1	1	0
Mr. F. C. Hobbs, Newport, Mon.	1	1	0
Mr. W. H. Bloye, Plymouth	1	1	0
Mr. T. S. Price, London	1	1	0
Amount previously acknowledged	6	0	0
	£12	12	0

Personal.

HICKS.—On the 30th Jan., at Moorcroft, Chelmsford, the wife of H. Hicks, M.R.C.V.S., of a son. Indian papers, please copy.

OBITUARY

GEORGE KING WAKE, M.R.C.V.S., East Dereham, Norfolk. Graduated, Lond.: April, 1862.

Mr. Wake died on Jan. 20th, 1916, aged 75.

ALEXANDER GILLESPIE, M.R.C.V.S., Newcastle-on-Tyne. 1861; Graduated, Edin.: Aug. 1879.

Death occurred Jan. 23, 1916, aged 75.

ARMY VETERINARY SERVICE

WAR OFFICE, LONDON, S.W.

Extract from *London Gazette*,

WAR OFFICE, WHITEHALL, Jan. 27.

REGULAR FORCES. ARMY VETERINARY CORPS.

Temp. Lieuts. relinquish their commns.:—E. J. Nicholson (Jan. 15), H. Bidlake.

To be temp. Lieuts.:—J. B. A. Hare (Jan. 15); T. W. Smith, H. Jewell (Jan. 16); W. J. Moody, F.R.C.V.S., J. E. Syme (Jan. 17).

Jan. 28.

Temp. Lieut. F. D. Early relinquishes his commission on the termination of his engagement (Jan. 29).

Jan. 29.

Temp. Lieut. to be temp. Capt.:—C. Armstrong (Jan. 18).

To be temp. Lieuts.:—A. O'Neill (Jan. 17); W. Hay (Jan. 18).

Feb. 1.

Capt. H. C. Stewart to be temp. Major whilst asst. Dir. of Vet. Svces. of a Division (Dec. 4).

Lieuts. to be Capts.:—W. H. Thomas, B. R. Body, G. A. Kelly, G. F. Steevenson, F. B. Hayes, F. Hogg, G. V. Golding, H. D. Lewis, D'A. S. Beck, H. Stephenson, T. L. Shea, H. E. A. L. Irwin, T. J. Davis, J. Going, U. W. F. Walker, C. Davenport, S. W. Marriott, F. J. Weir, J. Smith, C. M. Stewart, G. Williamson, J. R. Ellison, R. M. Bamford, S. O'Donel, A. A. Pryer, J. J. Mills, C. J. R. Lawrence, R. H. Knowles, C. H. S. Townsend, J. J. Plunkett, A. G. Lalor, S. L. Slocock, W. A. I. Buchanan, P. S. Sparling, R. Chown (Sept. 3)

To be temp. Lieut.:—W. Watt (Jan. 19).

Feb. 2.

Temp. Lieut. to be temp. Capt.:—J. Gosling (Jan. 7).

SPECIAL RESERVE OF OFFICERS.

Jan. 29.

The following Lieuts. (on prob.) are confirmed in their rank:—W. Shipley, T. Menzies, A. Monro, P. R. Turner, R. J. Stow, G. E. Oxspring, J. M. Culhane, P. Howard, R. C. G. Hancock.

TERRITORIAL FORCE. ARMY VETERINARY CORPS.

Jan. 27.

To be Capt.:—Capt. W. H. Savage, from the Welsh (Carnarvon) R.G.A. (Jan. 28).

The A.V.C. Comforts Fund.

Dear Sir—I have pleasure in again forwarding further particulars of subscriptions and gifts received since previously published list in your issue of January 15th. I have been asked by many interested in the work of the Comforts Fund to give some account of what the Fund has already accomplished since its inception more than a year ago. I therefore have made out a short statement which I trust you will be able to find space for. I hope, however, later in the year, to again have the privilege of laying a more detailed account of the work accomplished by the Comforts Fund before the subscribers at a public meeting; as was done last year the following particulars, will, I feel sure, be specially interesting to those kind supporters of the Comforts Fund who have given so generously and worked so industriously, and who thus by their efforts have enabled me to supply in some small part the needs of our men on active service. Yours truly,

ADELAIDE M. MOORE.

Strathyre, Parsifal Road,
Hampstead, N.W.
February 2nd.

Further Contributions received to Feb. 4th:—

Lieut. R. Mackenzie, A.V.C., T.F.	£1	1	0
per Mrs. Rutherford (Capt. Lewis Green, A.V.C., T.F.)		10	6
Mrs. Abson (Sheffield)	2	2	0
Mrs. Baird (Edinburgh): proceeds of Entertainment and subscriptions as collected	55	0	0
per Mr. Wm. Shipley: share of gift from veterinary officers with Lathrop Remount Commissions, U.S.A. (list of names of officers as published by Mr. Shipley)	33	2	6
	£91	16	0

Gifts received from and work done with materials as supplied:

Miss Hinxman: Shirts, mufflers, gloves, mittens, helmets.

per Mrs. Lattay and Mrs. Quinlan (St. Alban's Working Party): Mufflers, mittens, helmets, etc.

Mrs. J. Nunn: Mufflers. Mrs. McGowan: Socks
Mrs. Hodgson: Mufflers. Mrs. Hobday: Mufflers, mits
Mrs. Fowler: Mufflers, mits and socks
Mrs. Garnett: Mufflers, mits, helmets, socks
Mrs. Porteous: Mits, mufflers, socks
Miss Welborn: Socks, helmet, mits
Mrs. Murphy and Mrs. Sydney Marriage: Mufflers, helmet, socks, mittens
Mrs. Wooley: Mittens, helmet, waistcoat, socks
Mrs. Leckie: Shirts, cuffs, mufflers, mits, socks.
Mrs. Bolton: Mittens. Mrs. Recard: Mufflers
Mrs. Crawford, Mufflers
per Mrs. Quinlan and Mrs. Lattay: Mufflers, mittens
Mr. William Moore: Socks, belt, helmet, mittens.
Mrs. F. T. Harvey (St. Colomb, Cornwall): Socks, mittens, caps, mufflers, belf, shirt, pyjamas
Mrs. Hobday: Mittens
Mrs. A. Edgar: Socks, mittens, muffler
Mrs. Ascott: Mufflers, socks, mits, books, magazines
Mrs. R. N. Lewis: Belts, mufflers, helmet, socks, mits, cuffs
Mrs. Pritchard (and Working Party): Socks, helmets, mufflers
Mrs. D. Weir: Socks, mufflers, gloves, mittens
per Mrs. Ware (Epping), from Mr. F. Ware, Indian Civil Veterinary Dept., Madras, India: 7 flannel shirts, 12 mufflers, 2 sweaters, 8 prs. socks, 3 helmets, 3 prs. mittens
Mrs. Barber (Brewood): Mufflers, helmets, socks, mittens
Mrs. Clayton (Jersey): Mittens and cap
Mrs. Fennell: Socks. Mrs. Sheldon Jones: Socks
per Dr. Charnock Bradley: Mufflers
per Col. Queripel, from Mrs. G. H. Golding (Eastbourne) and Mrs. Toope (Devon): Parcel of gifts
Mrs. Kirkby: Helmets, caps, mittens
Mrs. Shipley: Mufflers, helmets, mittens, socks
Mrs. Walker (Alton): Swabs, socks, mittens
Mrs. Over (Rugby): Scarves, bedsocks, mittens
Mrs. W. S. Walker (Kirkby Lonsdale): Socks, mufflers
Mrs. Marks: Helmet

Articles as supplied *October, 1914, to April, 1915,* stated in my Report of the Work of the Comforts Fund as laid before the subscribers at meeting, Royal College of Veterinary Surgeons, June 2nd, 1915, sent to Army Veterinary Corps men on active service in France and Flanders:—

450 shirts	1550 pairs socks
1500 mufflers	380 vests
380 pants	600 caps and helmets
500 belts	1620 prs. mits. & gloves
100 cardigans & waistcoats	360 jerseys
300 blankets	500 inside soles for boots

And as received in *grant* from Indian Soldiers' Fund for the Indian personnel of Veterinary Hospitals attached Indian Force:—

100 prs. socks	1000 mufflers
500 vests	500 prs. gloves
500 prs. mittens	400 sweaters
500 prs. drawers	500 overcoats
200 helmets	200 blankets
500 shirts	

Articles as supplied to Army Veterinary Corps men on active service in France, Flanders and Mediterranean Expeditionary Forces, during the *three* months, *October, 1915, to January, 1916*:—

2150 prs. socks	500 vests
1900 prs. gloves and mits.	300 pants
1400 mufflers	700 handkerchiefs
600 caps and helmets	200 shirts

100 sweaters, jerseys, waistcoats, etc., also a large miscellaneous collection of sun shields, belts, pipes, etc.

The Fund is sending out weekly parcels of newspapers and illustrated papers, magazines, etc., to each of the large hospitals, and also smaller parcels go to each of the Mobile Veterinary Sections.

Huge consignments of writing materials have gone to all the large Veterinary Hospitals, and smaller consignments to each of the Mobile Sections. Over 1000 books have been sent, besides numerous games and other gifts, for use in the Recreation Huts.

At Christmas, each Mobile Section received a large Christmas cake, which was very greatly appreciated by both officers and men. To each of the large Hospitals the Comforts Fund supplied fruit and other additions for the Christmas dinner.

To the wives and families of the men of the *Regular* Army Veterinary Corps now on active service abroad, 125 cakes were despatched as a small token of remembrance and greeting to them for Christmas Day. Letters received in acknowledgement of these cakes show how gratefully they were appreciated.

I may add that in many other ways the Comforts Fund has been able to befriend and help wives and families in cases of illness and trouble.

Export of Live Stock to New Zealand.

Dear Sir,—I beg to inform you that the regulations governing the importation of live stock into New Zealand have recently been amended, and I attach hereto four extracts from the new Regulations, showing the conditions which have to be complied with in relation to (a) Horses, (b) Cattle, (c) Sheep, Goats and Swine, and (d) Dogs.

The following are the principal matters in which alterations have been made:—

Horses. The application of the Mallein test is made compulsory, instead of optional as heretofore. This must be applied within 30 days of shipment.

Cattle. The application of the Tuberculin test is also made compulsory, and such test must be made within 30 days of shipment. All cattle must have been in the country for six months prior to shipment, or from birth.

Sheep. Within 14 days of shipment sheep must be dipped by thorough immersion in an approved scab-destroying preparation under the supervision of the local Veterinary Surgeon countersigning the Owner's Declaration. All sheep must have been in the country for six months prior to shipment or from birth.

Dogs. No dog may be exported to New Zealand unless it has been in the United Kingdom for nine months, or from birth.

Quarantine. The following periods of quarantine are imposed on live stock arriving in New Zealand from the United Kingdom:—

Horses	14 days	Dogs	60 days
Pigs	14 „	Sheep	28 „
Cattle	40 „		

Provided that horses which pass the Mallein test on arrival may be allowed to land without quarantine.

Yours faithfully,
ALEXANDER CRABB, F.R.C.V.S.,
13 Victoria St., London, S.W. Vety. Officer.
January, 1916.

Regulations governing the importation into New Zealand of Horses and Mules from the United Kingdom.

Every shipment of horses from the United Kingdom to New Zealand must be accompanied by a Statutory

Declaration made by the shipper of such horses, setting forth the kind, number, sex, and brands or marks of such horses, and the name of the State or district in which such horses have been for the twelve months immediately preceding the date of shipment, and declaring that the horses are at the time of shipment, and have been during the preceding six months, free from all infections and contagious diseases, and have not during the six months immediately preceding shipment been in direct or indirect contact with any stock infected with any such disease.

On every such declaration there shall be inscribed a certificate signed by a Veterinarian practising in the district in which such horses have been domiciled for the six months immediately preceding the date of their shipment to New Zealand, or from which they start for the port of shipment, certifying that he has, within the 30 days immediately preceding the date of shipment to New Zealand, examined and tested with the Mallein test such horses, and has found them free from infectious and contagious diseases.

The declaration and the certificate provided for in the above paragraphs must be delivered to the Veterinarian hereinafter required to examine at the port of shipment horses intended for introduction into the Dominion.

The Regulations for other animals differ in detail only from the foregoing. The essential points of difference are here given :—

CATTLE.—The declaration by the shipper to state "such cattle have been during the preceding six months or from birth in the country from which shipment is being made, etc."

"A certificate to be signed by a veterinarian appointed in that behalf by the New Zealand Government or a veterinarian practising in the district, etc., certifying that he has, within the thirty days immediately preceding the shipment to New Zealand, examined and tested with the tuberculin test such cattle, etc. Particulars with respect to such test, showing dosages and temperature records, shall be supplied with such certificate."

SHEEP, GOATS OR SWINE.—The declaration by the shipper to state that "such sheep, goats or swine have been during the preceding six months, or from birth, in the United Kingdom, etc."

"A certificate signed by a veterinarian practising in the district certifying that he has, within the fourteen days immediately preceding the date of shipment to New Zealand, examined, etc., and in the case of sheep or goats that he has had them dipped, under his supervision, by thorough immersion in an approved scab-destroying preparation within the fourteen days immediately preceding the date of shipment as aforesaid."

DOGS.—The statutory declaration by the shipper to state "that such dogs have been during the preceding nine months, or from birth, in the United Kingdom; that they are and have been during the nine months free from all infectious and contagious diseases, and have not during the nine months been in contact with any infected stock."

"A certificate signed by a veterinarian practising in the district in which such dogs have been domiciled for the six months certifying that he has, within the fourteen days immediately preceding shipment, examined, etc."

DISEASES OF ANIMALS ACTS 1894 TO 1914, SUMMARY OF RETURNS.

Period.	Anthrax		Foot-and-Mouth Disease.		Glanders.†		Parasitic Mange. ‡		Sheep Scab.	Swine Fever.	
	Out-breaks (a)	Animals.	Out-breaks (a)	Animals.	Out-breaks (b)	Animals.	Out-breaks (b)	Animals.	(b)	Out-breaks (a)	Slaughtered. *
Gr. BRITAIN. Week ended Jan. 29	7	7			3	15	92	234	10	71	200
Corresponding week in 1915 ...	14	18			1	1	‡	‡	15	73	216
Corresponding week in 1914 ...	21	21			1	1	93	177	19	57	378
Corresponding week in 1913 ...	10	10			2	11	75	173	12	29	278
Total for 5 weeks, 1916	63	65			6	24	490	1338	97	385	1244
Corresponding period in 1915 ...	88	100			3	5	‡	‡	79	407	1722
Corresponding period in 1914 ...	98	105			9	26	428	845	71	237	1882
Corresponding period in 1913 ...	60	71			15	70	422	1010	57	175	2280

‡ The Parasitic Mange Order of 1911 was suspended from 6th August, 1914, to 27th March, 1915, inclusive.

(a) Confirmed. (b) Reported by Local Authorities.

† Counties affected, animals attacked :— London 1, Stafford 1, Fife 13.

Board of Agriculture and Fisheries, Feb. 1, 1916

IRELAND. Week ended Jan. 29	...	...	...	...	...	...	Outbreaks ...	20	5	1
Corresponding Week in 1915 ...	...	...	...	...	...	...	2	16	5	19
Corresponding Week in 1914 ...	...	...	1	19	...	...	3	33	4	20
Corresponding Week in 1913 ...	...	...	...	...	...	...	12	12	...	25
Total for 5 weeks, 1916 ...	1	5	...	...	...	...	9	85	18	37
Corresponding period in 1915 ...	...	...	...	...	...	...	5	69	20	99
Corresponding period in 1914 ...	...	...	1	19	...	...	17	118	15	94
Corresponding period in 1913 ...	...	...	...	...	...	...	49	89	24	124

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, Jan. 31, 1916

NOTE.—The figures for the Current Year are approximate only. * As diseased or Exposed to Infection.